

AMENDMENTS TO THE CLAIMS

1 (Currently Amended) A dental implant system that bears compressive mastication load conditions after installation, the system comprising a rigid implant including a connector sized and configured to be attached to a dental prosthesis,

an expandable polymer sheath suitable for placement within a jawbone, the sheath including polymer material means for functioning as an artificial periodontal membrane; and

a the rigid implant being sized and configured to fitting fit within the polymer sheath, the polymer material means and causing expansion of the polymer sheath when fitted within the sheath being operative for expanding and thereby compressing surrounding jawbone structure in response to fitment of the rigid implant and, while in compression, for bearing compressive mastication load conditions.

2 (Currently Amended) A system as in claim 1 or 39
wherein the polymer material means includes is Ultra High Molecular Weight Polyethylene.

3 (Currently Amended) A system as in claim 1 or 39
wherein the polymer material means includes is Polypropylene.

4 (Currently Amended) A system as in claim 1 or 39
wherein the polymer material means includes is High Density Polyethylene.

5 (Currently Amended) A system as in claim 1 or 39
wherein the polymer material means includes is Polyurethane Elastomer.

6 (Currently Amended) A system as in claim 1 or 39
wherein in the implant is made of titanium or an alloy thereof.

7 (Currently Amended) A system as in claim 1 or 39
wherein the implant is made of stainless steel or an alloy thereof.

8 (Currently Amended) A system as in claim 1 or 39
wherein the polymer sheath has an exterior surface that is ribbed.

9 (Currently Amended) A system as in claim 1 or 39
wherein the polymer sheath has an interior surface that is threaded, and
wherein the implant has an exterior surface that is threaded, and

whereby the interior surface of the polymer sheath mates with the exterior surface of the implant when the implant is fitted within the polymer sheath.

10 (Currently Amended) A system as in claim 1 or 39

wherein the implant is tapered.

11 (Currently Amended) A system as in claim 1 or 39

wherein the implant is ribbed.

12 (Canceled)

13 (Currently Amended) A dental implant system as ~~in claim 12 that bears~~
compressive mastication load conditions after installation, the system comprising

a dental prosthesis,

a rigid implant including a connector sized and configured to be attached to the
dental prosthesis,

an expandable polymer sheath suitable for placement within a jawbone, the sheath
including polymer material means for functioning as an artificial periodontal membrane; and

the rigid implant being sized and configured to fit within the polymer sheath, the
polymer material means being operative for expanding into compression within the jawbone in
response to fitment of the rigid implant and for bearing compressive mastication load conditions on
the dental prosthesis

~~wherein the polymer sheath, the implant, and the abutment, when coupled together~~
~~and inserted within a jawbone, form a support structure that permits attachment of a dental~~
~~prosthesis.~~

14 (Currently Amended) A system as in claim 13 or 44

wherein the dental prosthesis is a single crown.

15 (Currently Amended) A system as in claim 13 or 44

wherein the dental prosthesis is a bridge.

16 to 19 (Canceled)

20 (Currently Amended) A method of installing a dental prosthesis
comprising the steps of:

providing a system as in claim 1;

providing a dental prosthesis;

preparing a site within a jawbone;
inserting the polymer sheath into the prepared site;
inserting the implant within the sheath, thereby causing expansion of the polymer material means ~~sheath~~ within the jawbone;

~~coupling the abutment to the implant in a compressive loading condition;~~
~~whereby the sheath, the implant, and the abutment form a support structure for a dental prosthesis; and~~

attaching a the dental prosthesis to the ~~abutment~~ connector.

21 (Currently Amended) A method as in claim 20

wherein the dental prosthesis is a crown.

22 (Currently Amended) A method as in claim 20

wherein the dental prosthesis is a bridge.

23 – 33 (Canceled)

34 (New) A dental implant that bears compressive mastication load conditions after installation, the implant comprising an expandable polymer sheath suitable for placement within a jawbone, the sheath including polymer material means for functioning as an artificial periodontal membrane, the polymer material means further being operative for expanding and thereby compressing surrounding jawbone structure in response to fitment of a rigid body into the sheath and, while in compression, for bearing compressive mastication load conditions

35 (New) An implant according to claim 34 or 43

wherein the polymer material means includes Ultra High Molecular Weight Polyethylene.

36 (New) An implant according to claim 34 or 43

wherein the polymer material means includes Polypropylene.

37 (New) An implant according to claim 34 or 43

wherein the polymer material means includes High Density Polyethylene.

38 (New) An implant according to claim 34 or 43

wherein the polymer material means includes Polyurethane Elastomer.

39 (New) A dental implant system that bears compressive mastication load conditions after installation without a presence of osteo ingrowth, the system comprising a rigid implant including a connector sized and configured to be attached to a dental prosthesis,

an expandable polymer sheath suitable for placement within a jawbone, the sheath including polymer material means for functioning as an artificial periodontal membrane; and

the rigid implant being sized and configured to fit within the polymer sheath, the polymer material means being operative for expanding and thereby compressing surrounding jawbone structure in response to fitment of the rigid implant and, while in compression, for bearing compressive mastication load conditions without a presence of osteo ingrowth.

40 (New) A method of installing a dental prosthesis comprising the steps of:
providing a system as in claim 39;
providing a dental prosthesis;
preparing a site within a jawbone;
inserting the polymer sheath into the prepared site;
inserting the implant within the sheath, thereby causing expansion of the polymer material means within the jawbone; and

attaching the dental prosthesis to the connector.

41 (New) A method as in claim 40
wherein the dental prosthesis is a crown.

42 (New) A method as in claim 40
wherein the dental prosthesis is a bridge.

43 (New) A dental implant that bears compressive mastication load conditions after installation without a presence of osteo ingrowth, the implant comprising an expandable polymer sheath suitable for placement within a jawbone, the sheath including polymer material means for functioning as an artificial periodontal membrane, the polymer material means further being operative for expanding and thereby compressing surrounding jawbone structure in response to fitment of a rigid body into the sheath and, while in compression, for bearing compressive mastication load conditions with a presence of osteo ingrowth.

44 (New) A dental implant system that bears compressive mastication load conditions after installation without a presence of osteo ingrowth, the system comprising

- a dental prosthesis,
- a rigid implant including a connector sized and configured to be attached to the dental prosthesis,
- an expandable polymer sheath suitable for placement within a jawbone, the sheath including polymer material means for functioning as an artificial periodontal membrane; and
- the rigid implant being sized and configured to fit within the polymer sheath, the polymer material means being operative for expanding into compression within the jawbone in response to fitment of the rigid implant and for bearing compressive mastication load conditions on the dental prosthesis without a presence of osteo ingrowth.